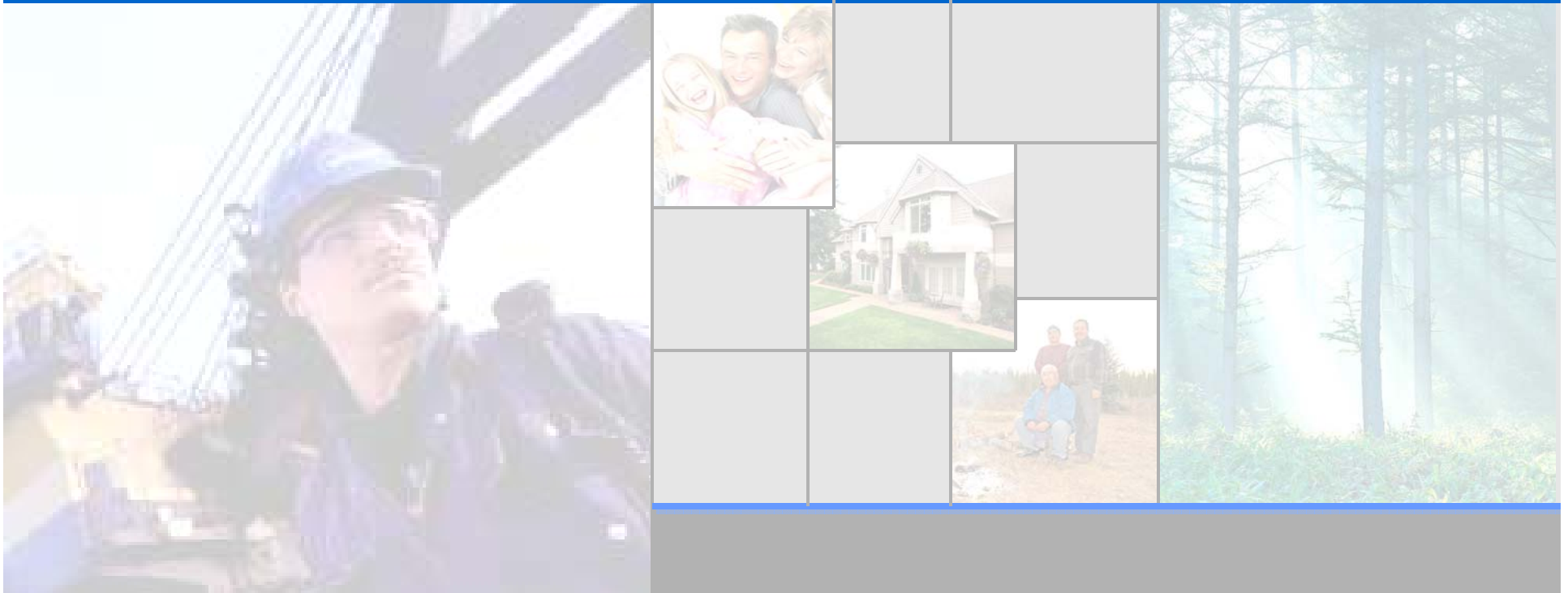


Alberta's Oil Sands: An Overview

*Presented by Jim Carter
to FEI Canada
Jasper, Alberta
June 2008*



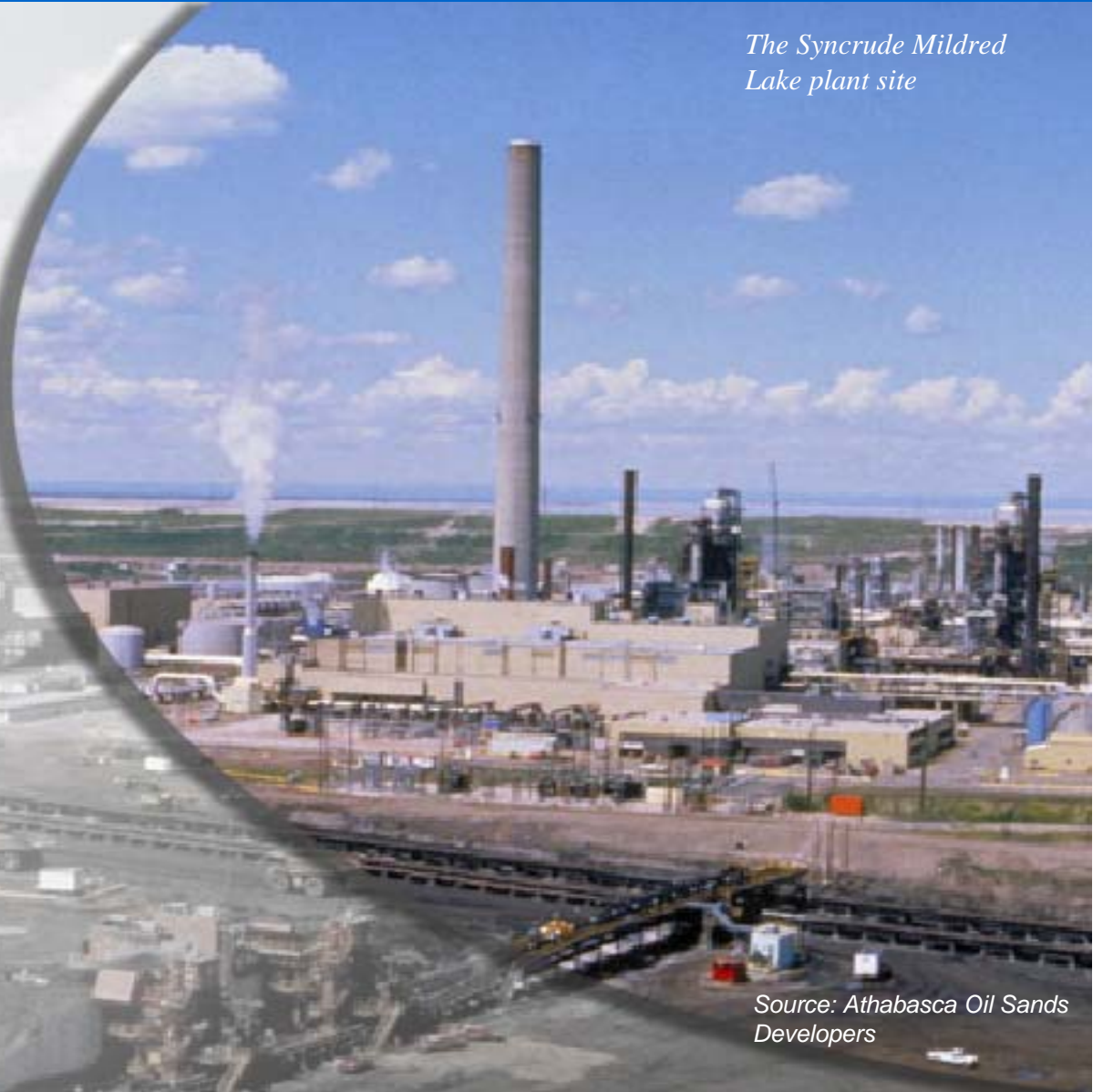
A unique resource



- Oil sand a mixture of bitumen, sand, water and clay
- Two methods of viable recovery today:
 - *In-situ*—wells below 80 metres
 - Surface mining—accounts for most activity to date

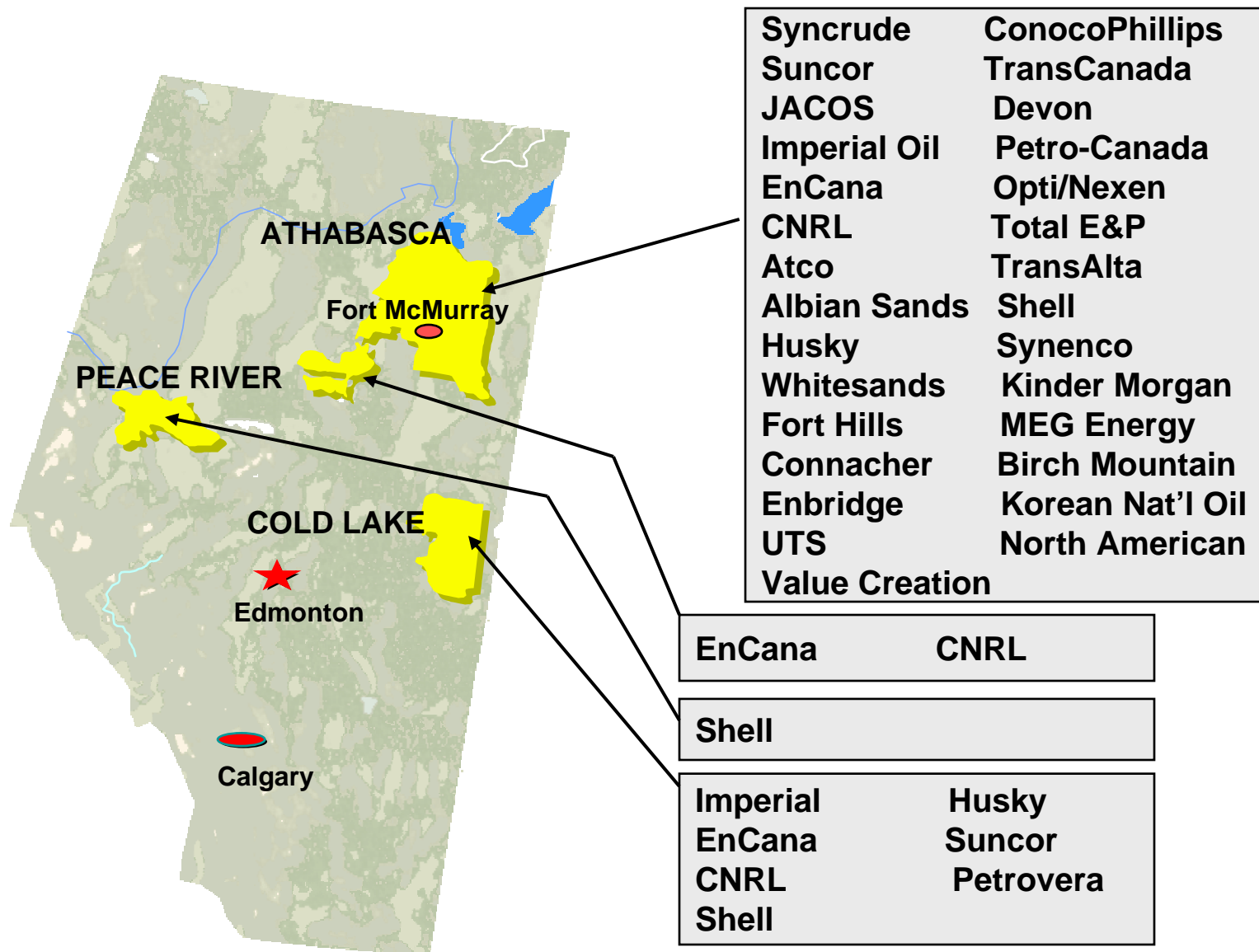
Oil sands in three deposits

The Syncrude Mildred Lake plant site



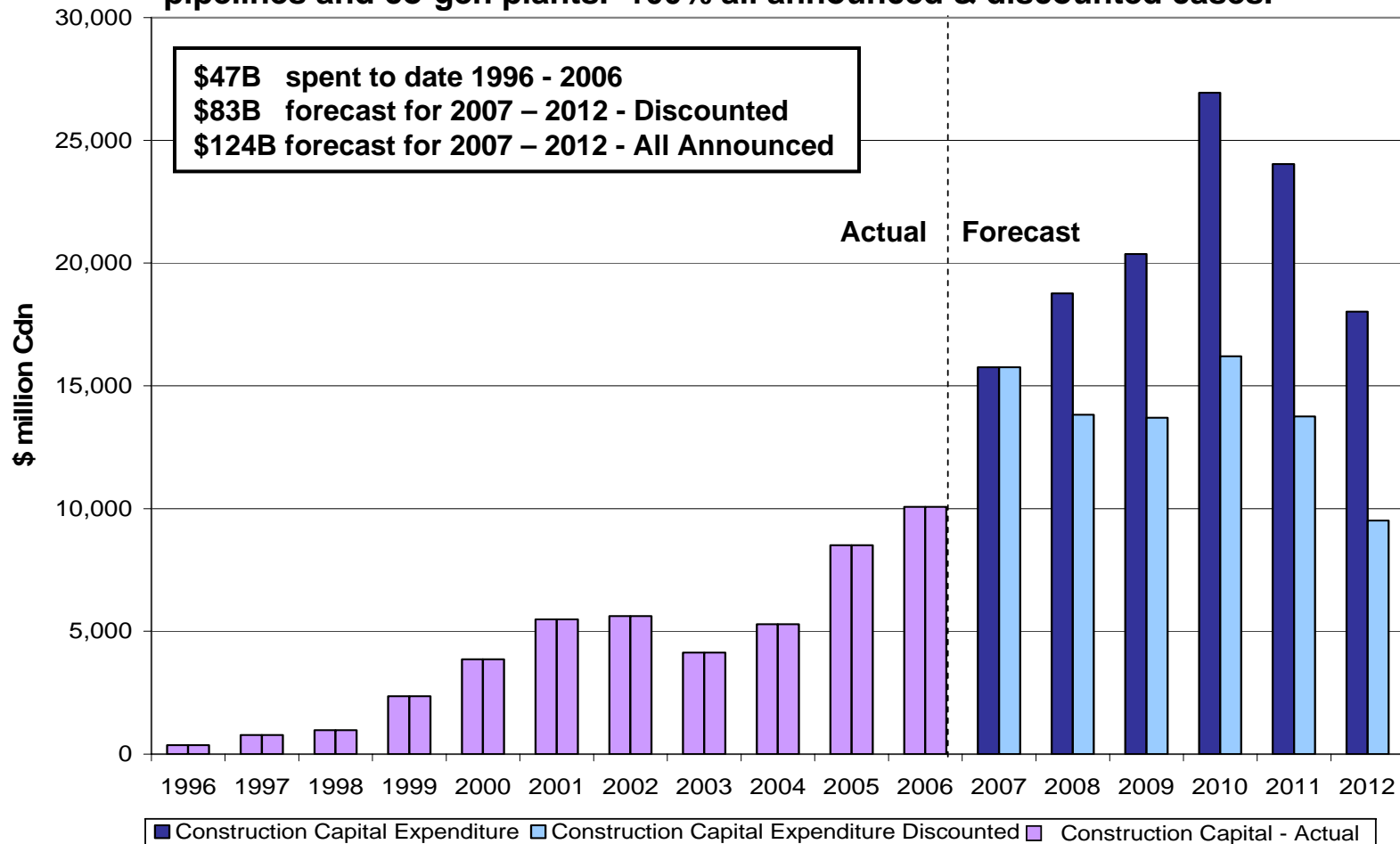
Source: Athabasca Oil Sands Developers

Oil Sands Related Projects



Construction Capital Expenditure Forecast – New Records Predicted for Alberta Oil Sands

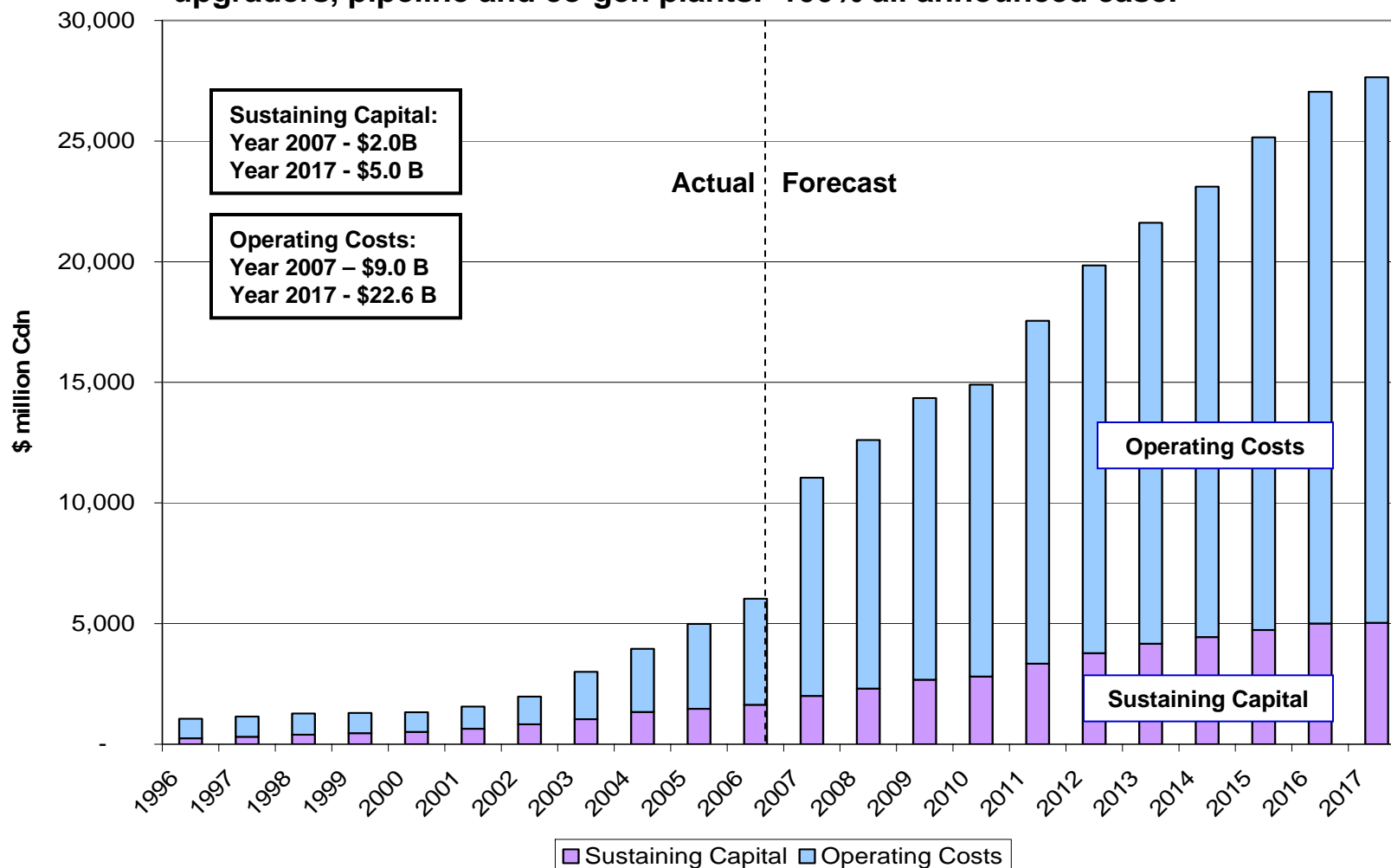
2007 Forecast: All Alberta oil sands projects including mines, insitu, upgraders, pipelines and co-gen plants. 100% all announced & discounted cases.



Source: CAPP & Nichols Applied Management

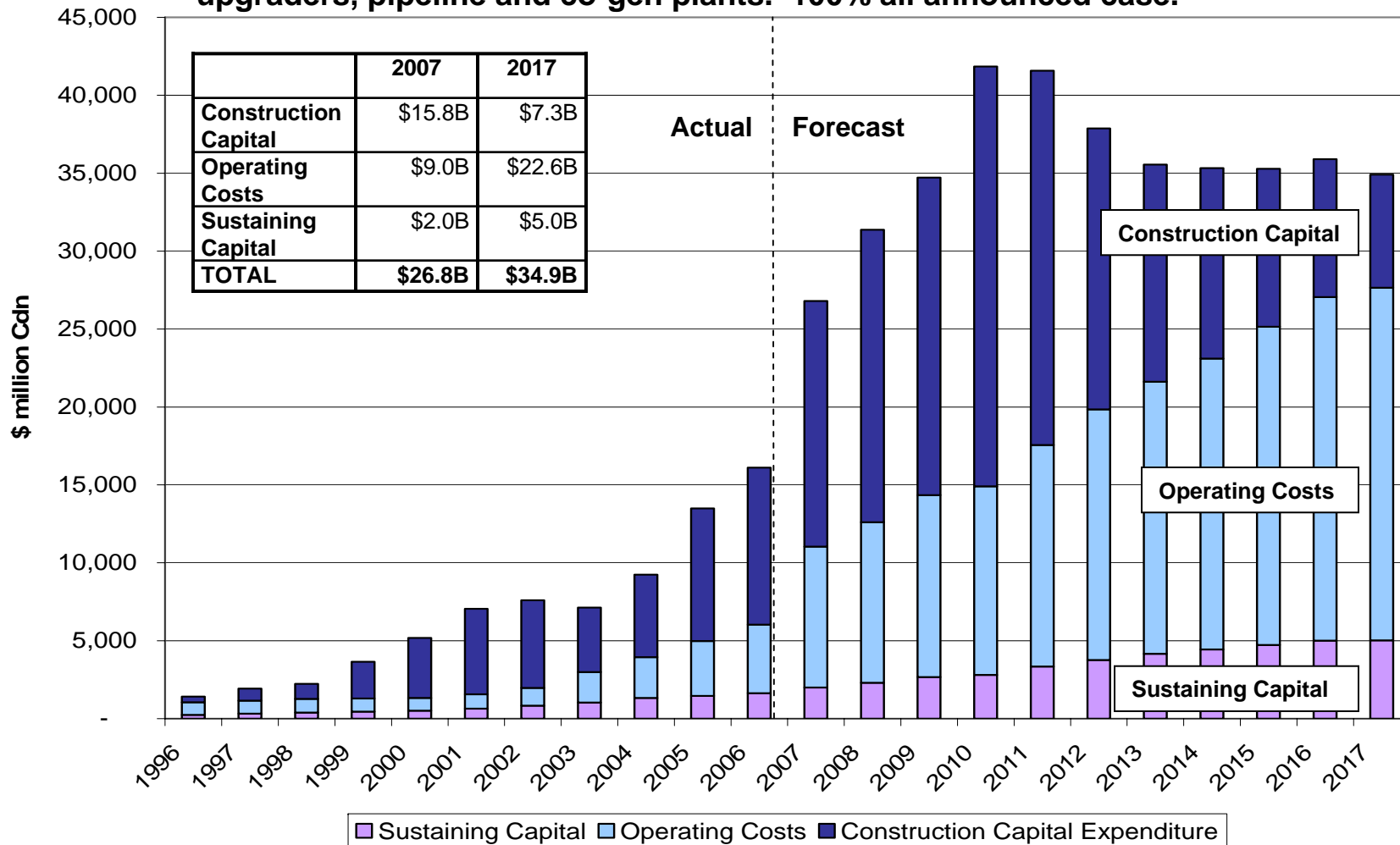
Forecast of Sustaining Capital & Operating Costs An Ongoing Mega Project for the Life of the Resource

2007 Forecast: All Alberta oil sands related projects – including mines, insitu, upgraders, pipeline and co-gen plants. 100% all announced case.



Alberta Oil Sands – Forecast of Combined Expenditures: Opex to Double Current Capex in the Next 10 Years

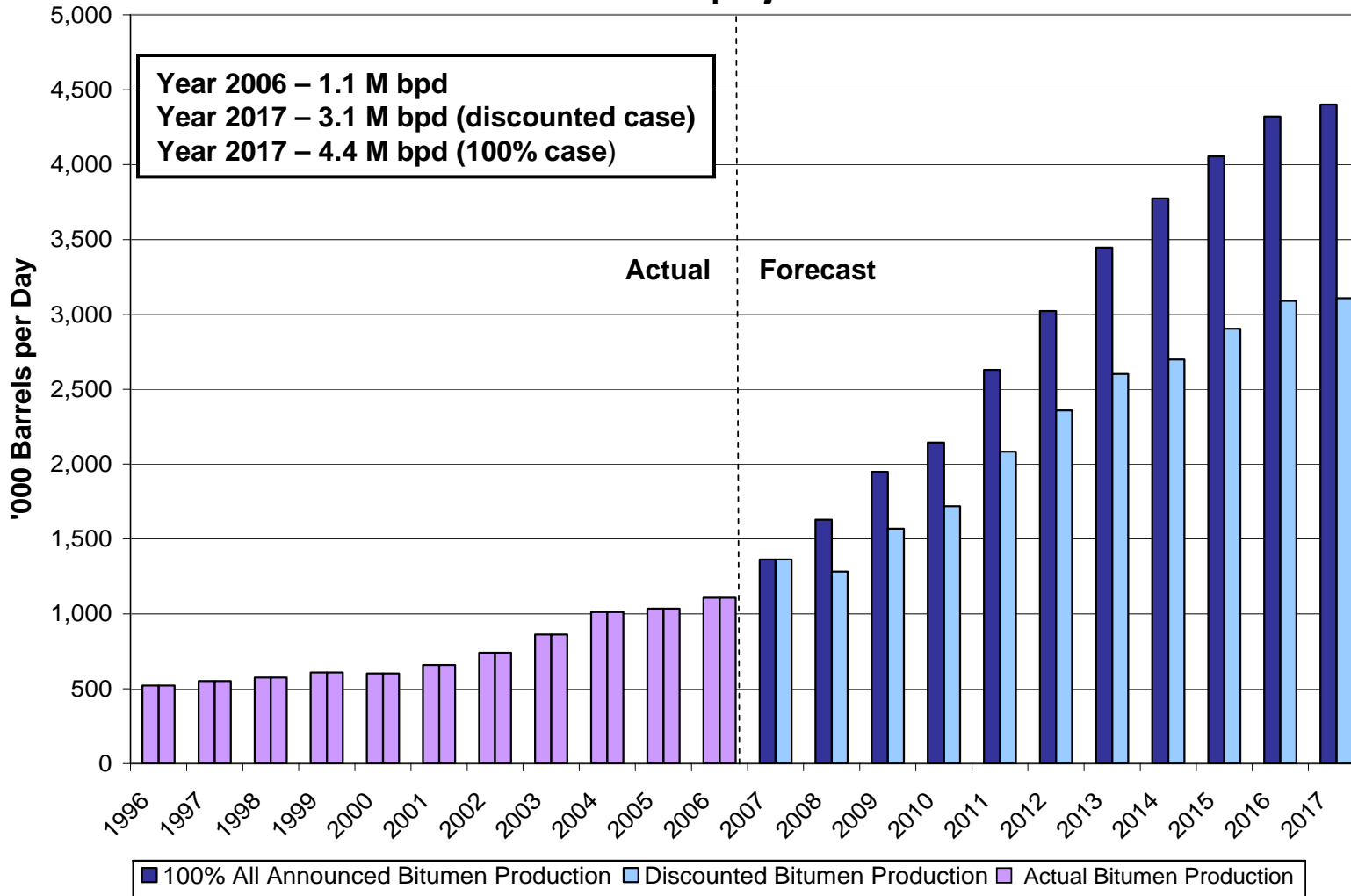
2007 Forecast: All Alberta oil sands related projects – including mines, insitu, upgraders, pipeline and co-gen plants. 100% all announced case.



Source: CAPP, Nichols Applied Management

Alberta Oil Sands Bitumen Production Forecast – At Least Triple in 10 Years

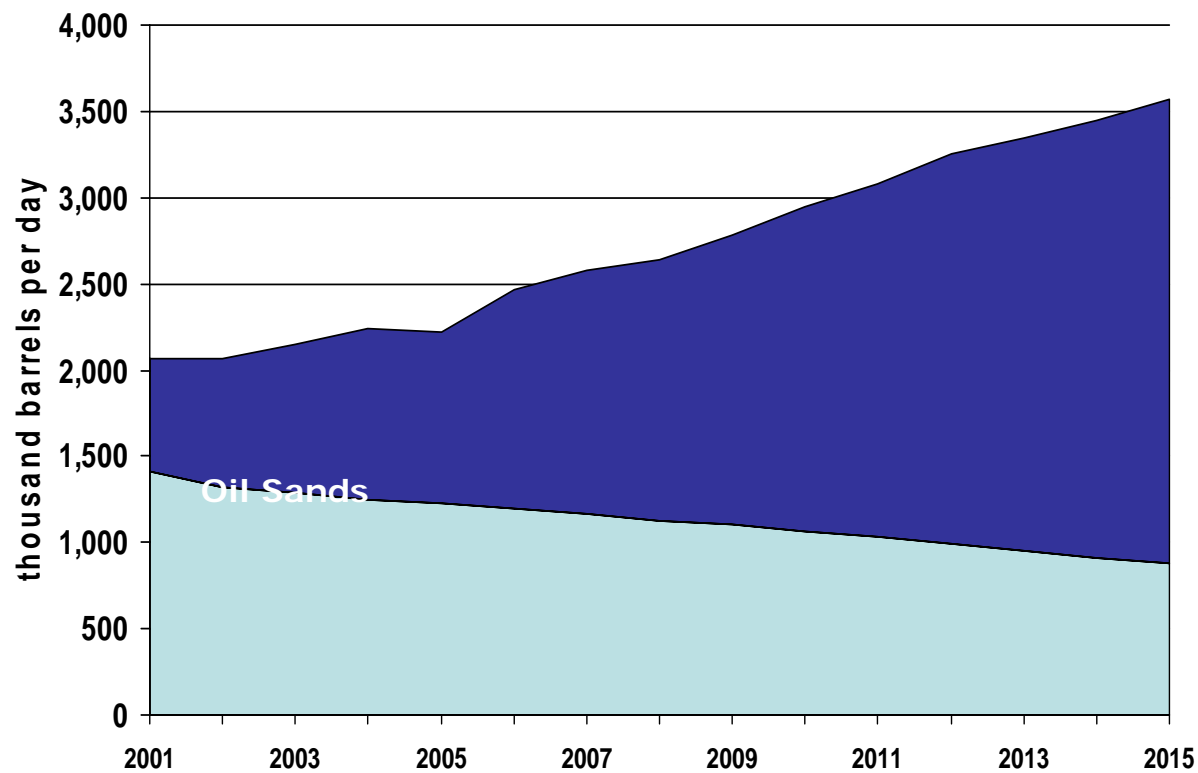
2007 Forecast: All Alberta oil sands projects



Source: CAPP & Nichols Applied Management

The rise of the oil sands industry

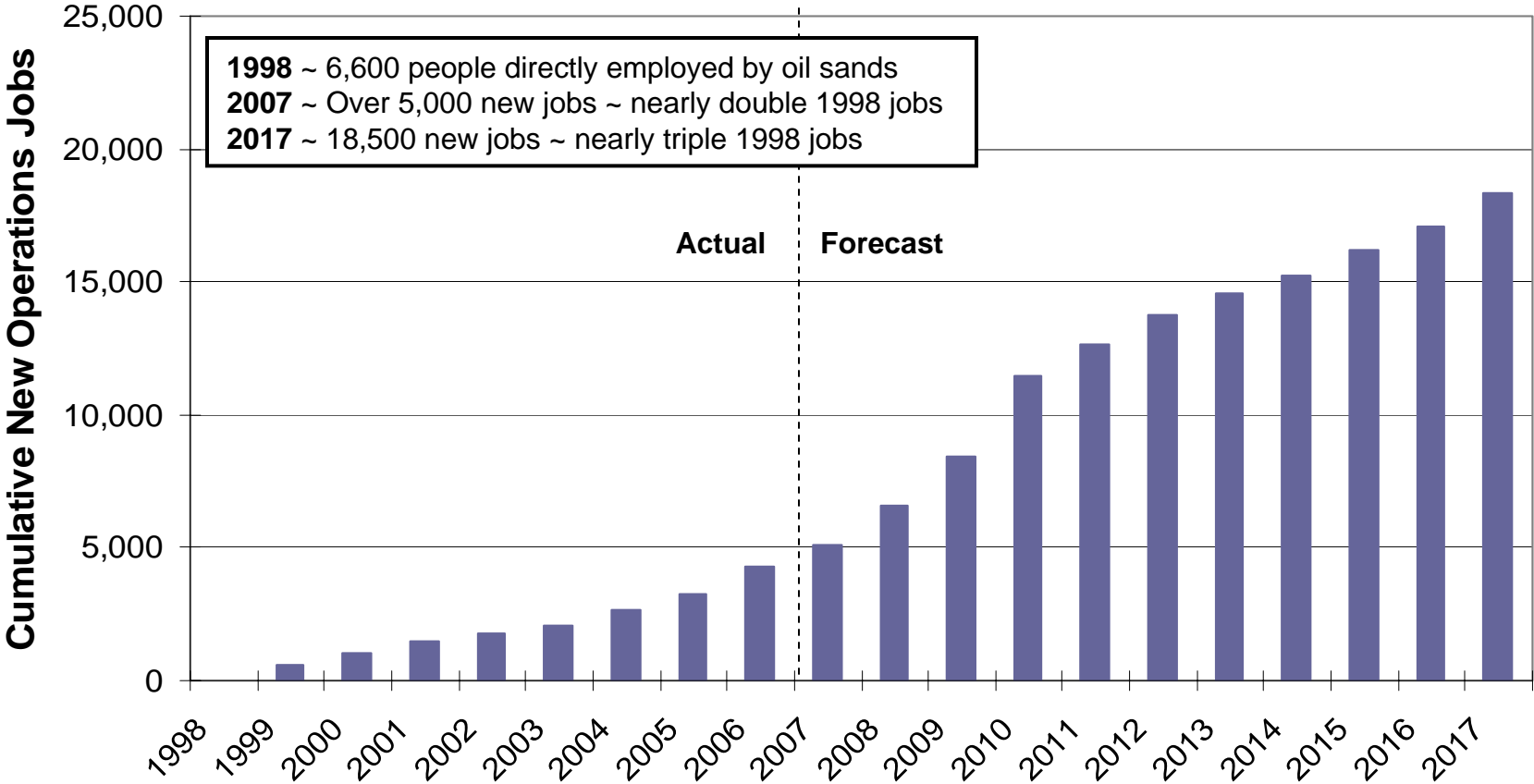
Conventional vs. Oil Sands Production



Source: Canadian Association of Petroleum Producers

Continuing Benefits: Oil Sands Permanent Operations Jobs – Wood Buffalo Region

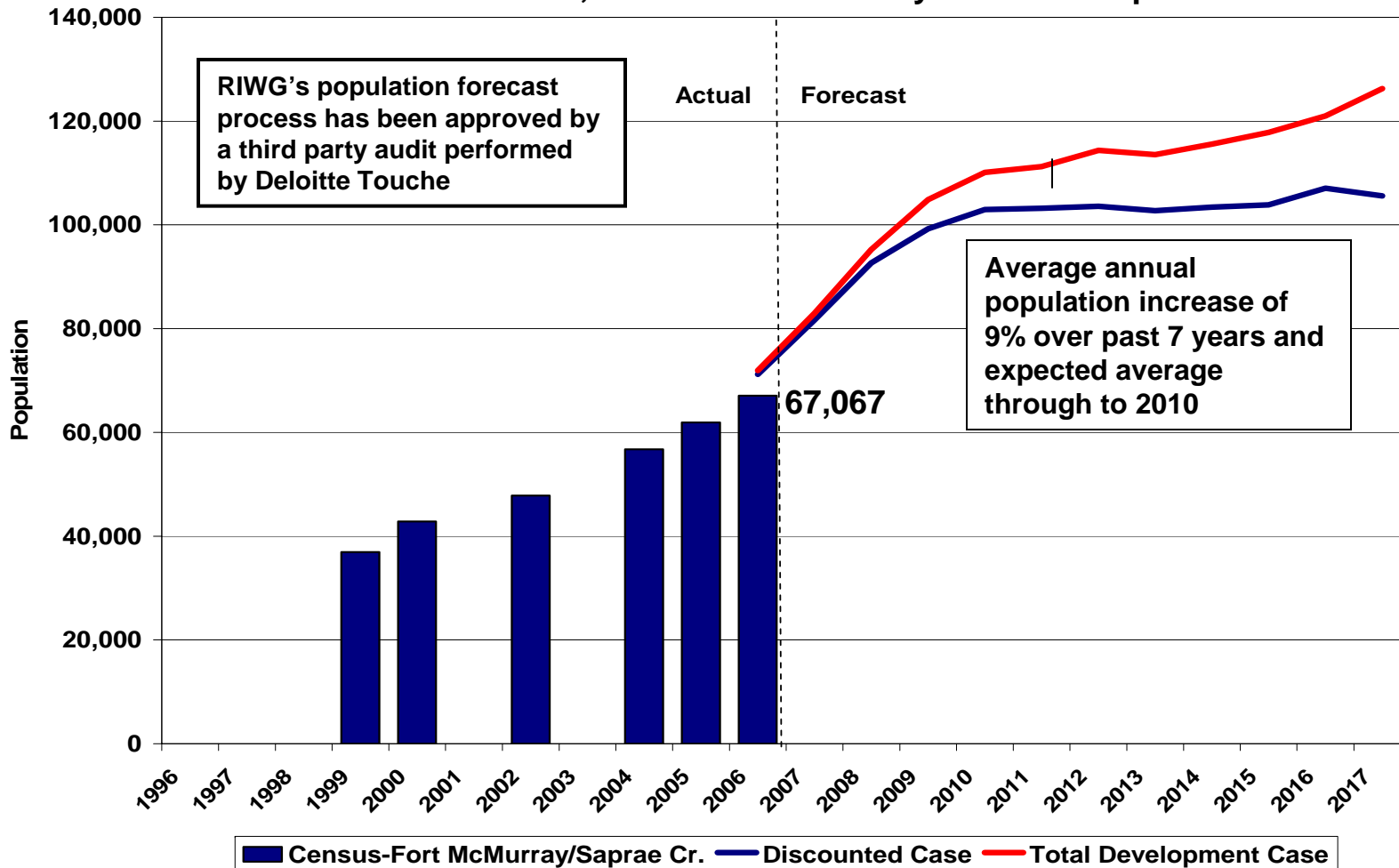
2007 Forecast: Cumulative permanent operations jobs for oil sands projects located in the Wood Buffalo Region (does not include construction jobs).



Source: Nichols Applied Management

Wood Buffalo Urban Population Forecast

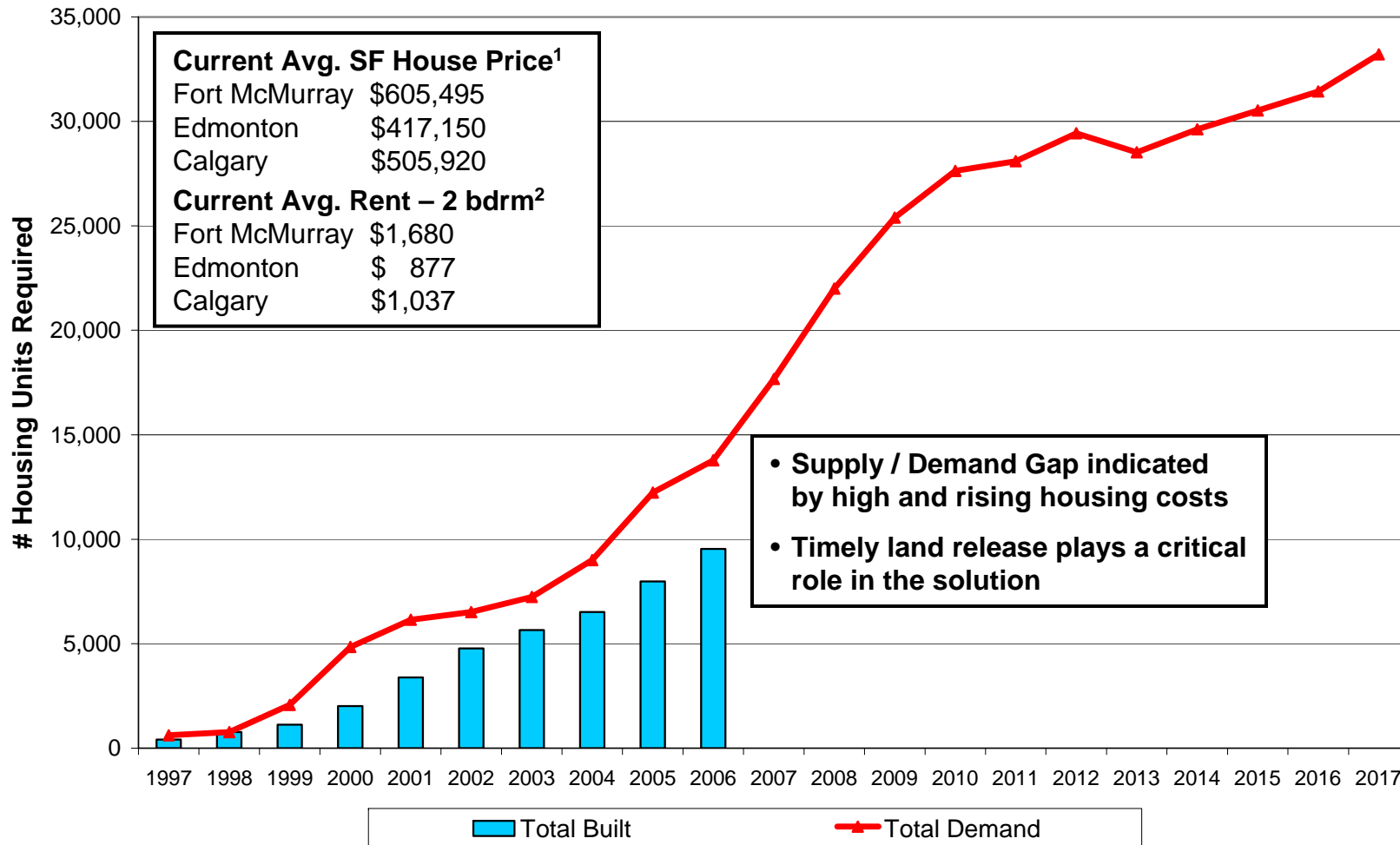
- 2007 Forecast – Urban Population – Fort McMurray Urban Service Area/Saprae Creek
- Does not include over 20,000 workers currently in work camps and hotels/motels



Source: RMWB Census & Nichols Applied Management

Wood Buffalo Urban Housing Demand Forecast

2007 Cumulative housing demand forecast for Fort McMurray

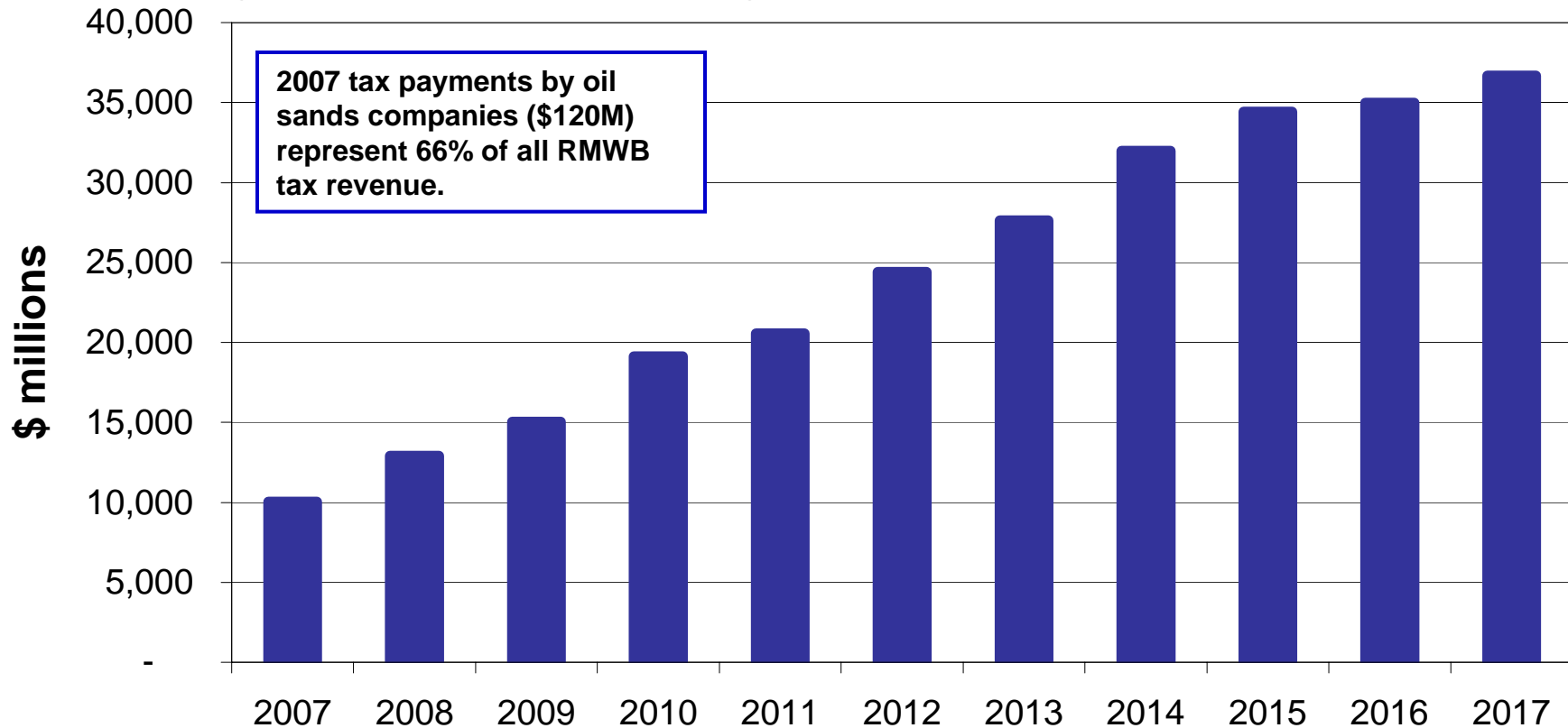


Source: Nichols Applied Management

1 – Fort McMurray, Edmonton, Calgary Real Estate Boards July 07, 2 – CMHC – Spring 07

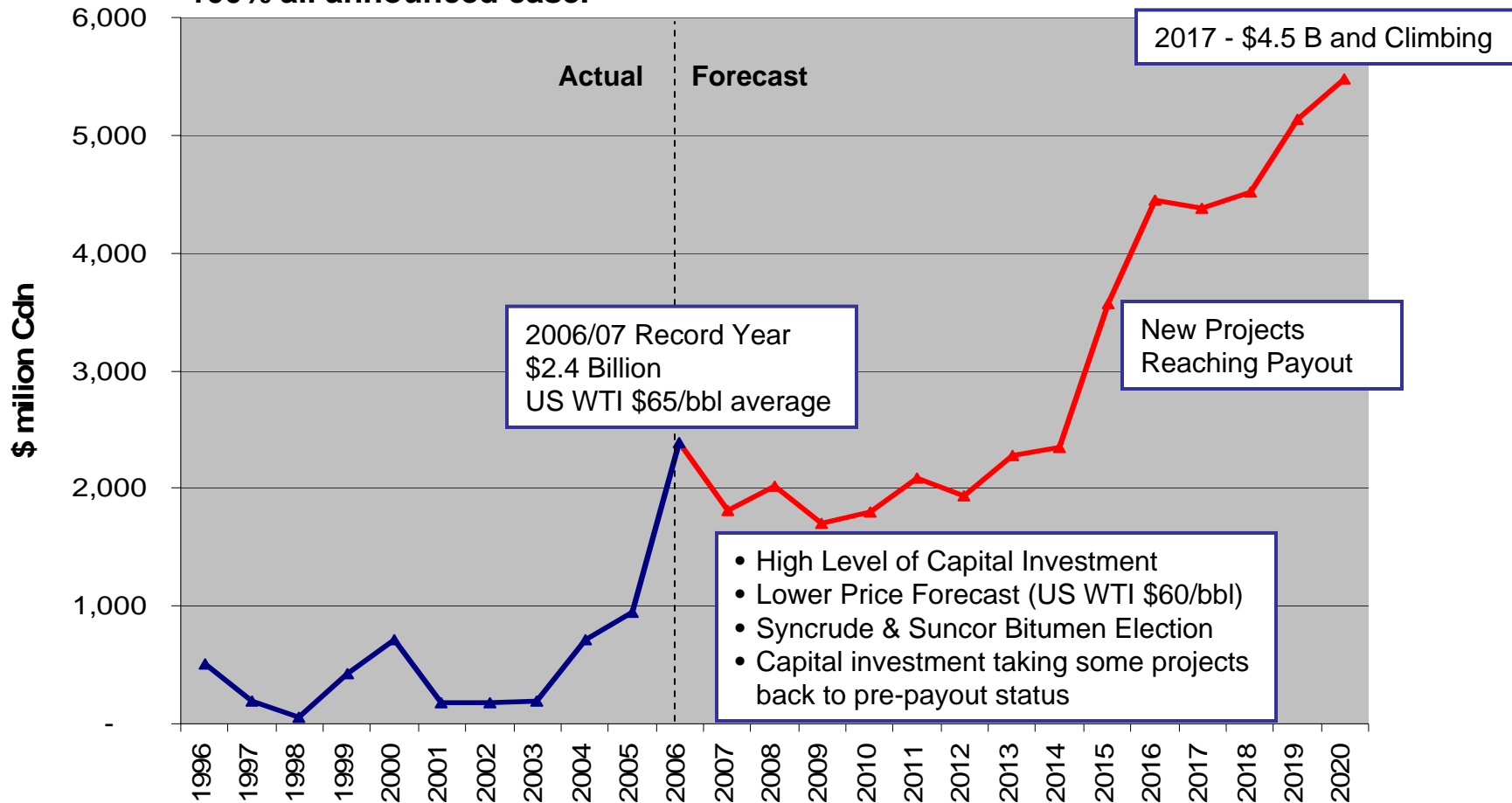
RMWB Municipal Tax Base Growth Forecast – Tax Base Will More than Triple in 10 Years

2007 Forecast of RMWB Tax Base Growth: Oil sands industrial assessment to grow 12% per year compounding for the next 10 years.



Alberta Oil Sands Royalties: Historical & 2007 Forecast

**2007 Oil Sands Royalty Forecast: Based on oil price of WTI US\$60/bbl.
100% all announced case.**

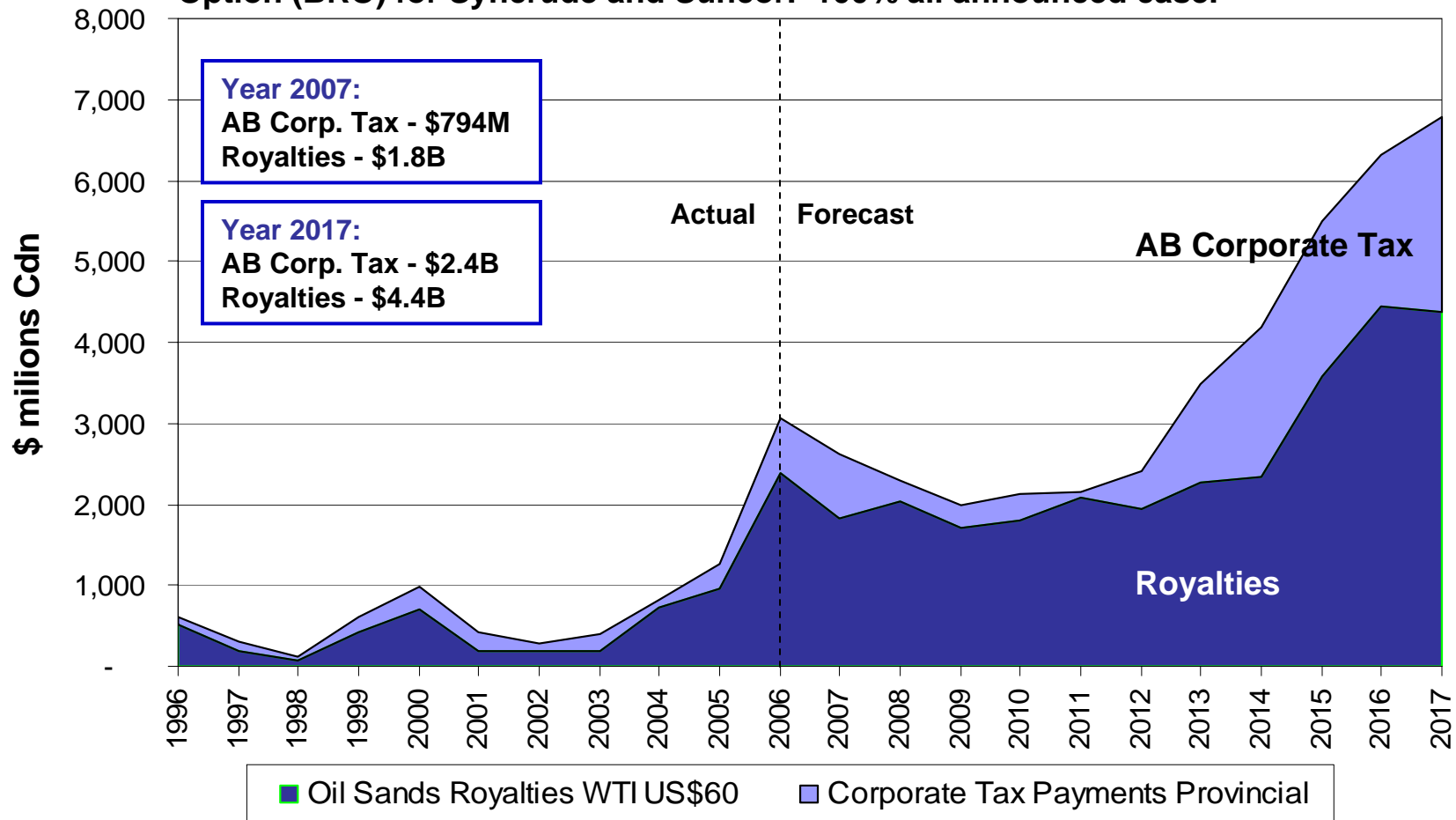


Source: Nichols Applied Management

Alberta Oil Sands – Royalty & Corporate Provincial Taxes

Alberta Government Return Will More than Double in 10 Years

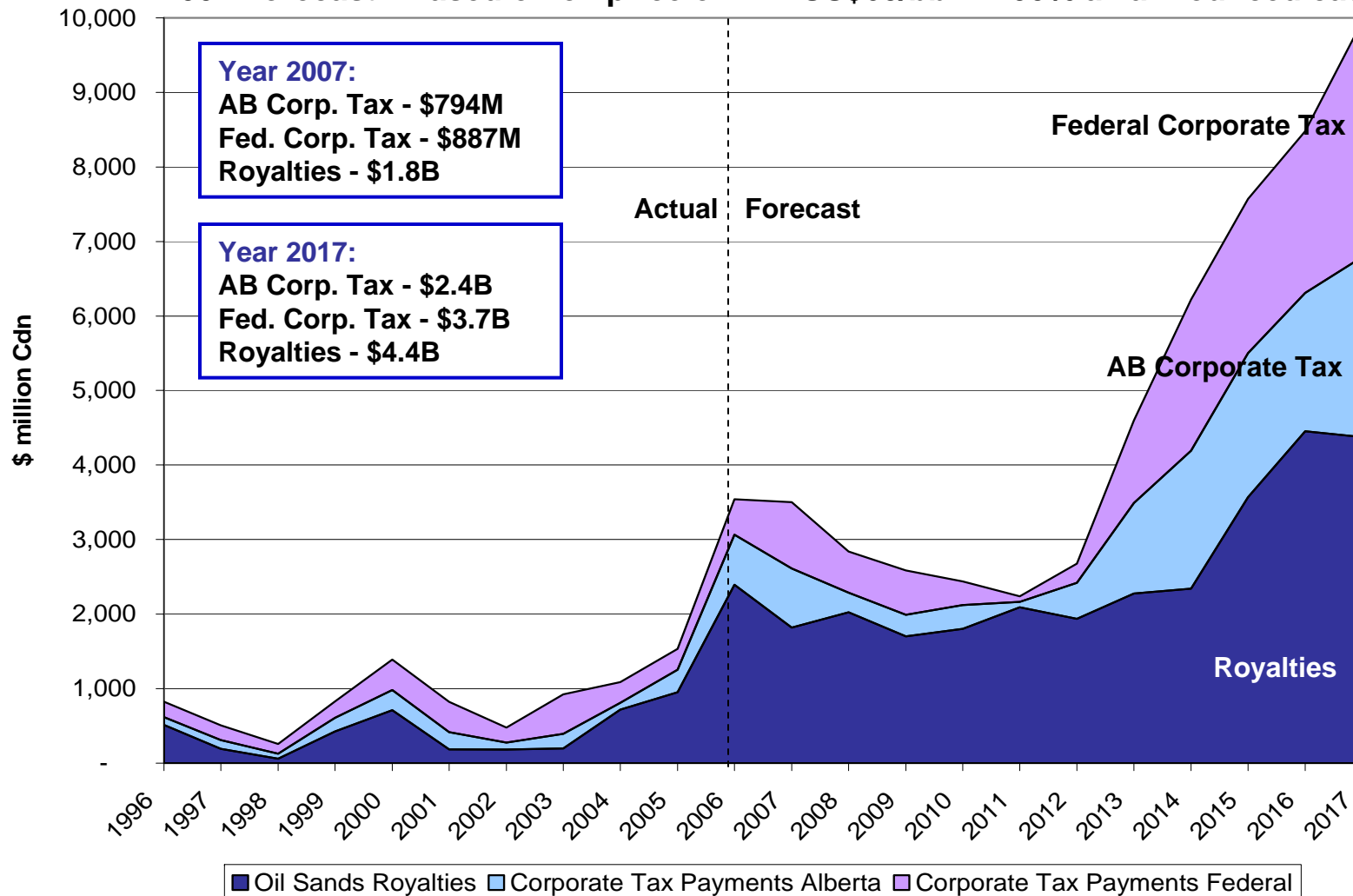
2007 Forecast: Based on oil price of WTI US\$60/bbl. Includes Bitumen Royalty Option (BRO) for Syncrude and Suncor. 100% all announced case.



Source: Nichols Applied Management
 Input assumes \$0.87 exchange rate

Alberta Oil Sands – Royalties, Provincial & Federal Corporate Taxes. Combined Gov't Return Will Nearly Triple in 10 Years

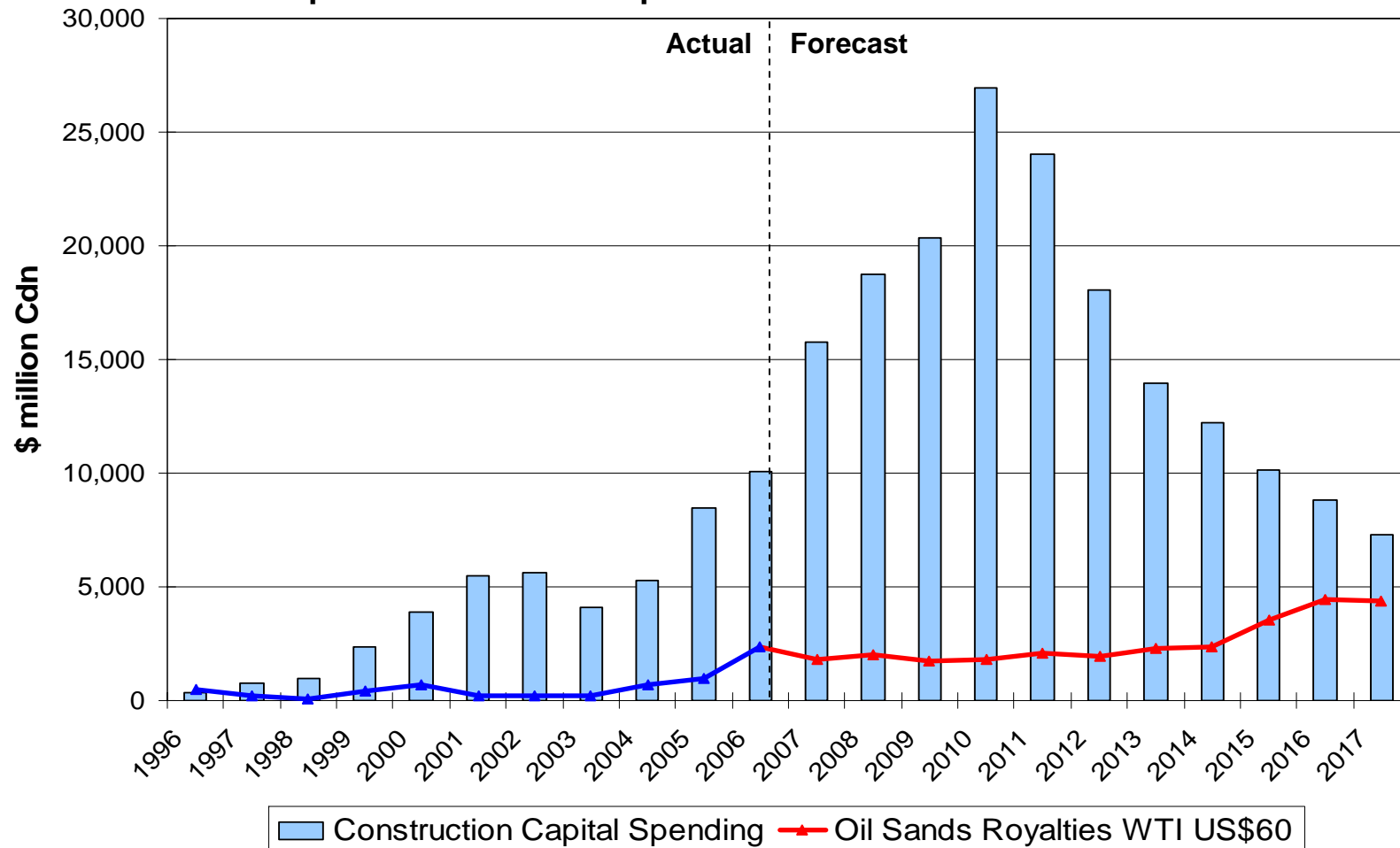
2007 Forecast: Based on oil price of WTI US\$60/bbl . 100% all announced case.



Source: Nichols Applied Management
 Input assumes \$0.87 exchange rate

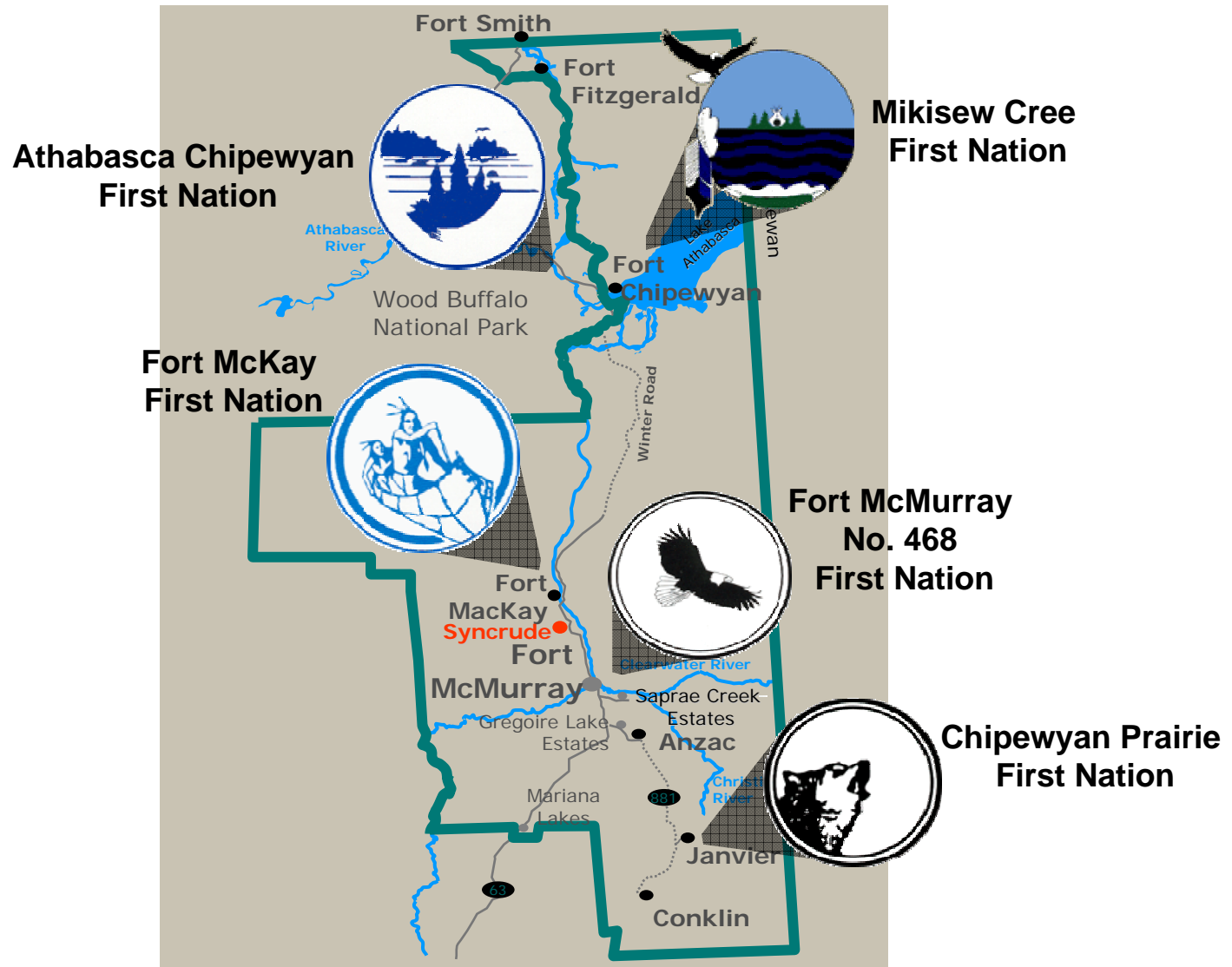
Alberta Oil Sands – Comparison of Royalties and Construction Capital Expenditures – A Successful Regime According to Plan

- **2007 Royalty Forecast:** based on oil price of WTI US\$60/bbl. 100% all announced case.
- **2007 Capital Construction Expenditure Forecast:** 100% all announced case.



Source: CAPP, Nichols Applied Management
 Input assumes \$0.87 exchange rate

Wood Buffalo First Nations



Working Together – Aboriginal Involvement in Oil Sands Development

- Value of contracts with Aboriginal Companies in 2006 - \$412 million
- Aboriginal employees in operations jobs in 2006 – 1,500+
- Average annual salary of Aboriginal employees in 2006 - \$81,000
- Contributions to Aboriginal communities in 2006 - \$3.7 million
- Athabasca Tribal Council All-Parties Core Agreement
- Industry Relations Corporations (IRCs)
- Developing Consultation and Regional Benefits Agreement



Courtesy of Suncor



Courtesy of Syncrude



Courtesy of Suncor

Corporate Donations

- In 2006 the oil sands industry donated \$11.5 million to groups and organizations within the Wood Buffalo region. (ie. MRI, recreation centres, schools, United Way)
- More than \$40 million donated over the past 10 years.



Ongoing Net Reduction in Environmental Impact

- Significant and ongoing investment in research and development to improve efficiency
- Flue gas desulphurization
- Low energy extraction – hydrotransport
- Co-generation electrical generation
- New methods of reclamation

Oil Sands Development...

Keys to a Successful Model

- Multi-stakeholder collaboration and issues management/monitoring/resolution:
 - CEMA, RAMP, WBEA, ATC
- Effective Industry Associations:
 - CAPP, ACR, MAC
- Corporations committed to community investment
- Leadership in Aboriginal consultation, employment and business development

Oil Sands Development...

Challenges and Impacts

- Regional Infrastructure
 - Roads, housing, municipal services, health and recreation
 - Creating a welcoming community with the “boomtown” label
- Environmental Impacts
 - Air: Reducing emission intensity
 - Water: Reduce, recycle and re-use
 - Land: Reclamation, direction drilling from a single site
 - Waste reduction
- Capital and Operating Costs
 - Costs need to continue to lower
 - Alternatives for natural gas for fuel
 - New technologies
 - Optimized capital designs and modularization
- Workforce:
 - Skilled trades, technical and professional labour
- Market Access
 - Need new pipelines
 - Need new refineries, expansions and modifications